



Able Marine Energy Park

Material Change 2

Habitats Regulations Assessment Part 3 & 4

June 2021
Revision 1
BDB Pitmans

Proposed Able Marine Energy Park (AMEP) Material Change 2 Application TR030006

Alternative Solutions and Imperative Reasons of Overriding Public Interest (IROPI)

June 2021



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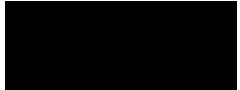


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MATERIAL CHANGE 2 APPLICATION

REPORT TITLE: ALTERNATIVE SOLUTIONS AND IMPERATIVE
REASONS OF OVERRIDING PUBLIC INTEREST
(IROPI)

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AMEP Material Change Application – Alternative Solutions and IROPI Report

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1.0 Introduction & Context

- 1.1 This report has been prepared by Fairhurst on behalf of Able Humber Ports Limited (AHPL), to support a material change application for proposed changes to the scheme consented under The Able Marine Energy Park Development Consent Order 2014 (Statutory Instrument 2014 No. 2935), as amended by the Able Marine Energy Park Development Consent (Amendment) Order 2021 (Statutory Instrument 2021 No. 606), ('the DCO').
- 1.2 The DCO permits, *inter alia*, the development of a new quay and associated development at Killingholme in North Lincolnshire, on the south bank of the Humber estuary. Briefly, the development on the south bank comprises a quay, reclaimed estuarine habitat and the provision of onshore facilities for the manufacture, assembly and storage of components relating to the offshore renewable energy sector. The DCO further permits other associated development comprising environmental habitat on the north bank of the Humber, in the East Riding of Yorkshire.
- 1.3 The Deemed Marine Licence at Schedule 8 of the DCO has been varied twice by the Marine Management Organisation. Variation No. 1 was issued on 23 June 2017 (<https://www.gov.uk/government/publications/able-marine-energy-park-variation>) and Variation 2 was issued on 16 September 2020 (<https://www.gov.uk/government/publications/amep-marine-energy-park-variation-2>). Further, on 27 July 2020 the Secretary of State for Transport approved extending the 5-year time limit for the commencement of the approved tidal works as required under the provisions of Article 23 of the DCO.
- 1.4 The Applicant is now seeking to amend the authorised development. The proposed changes are summarised below:
- Changes to the proposed quay layout to reclaim the specialist berth at the southern end of the quay, and to set back the quay line at the northern end of the quay to create a barge berth;
 - The addition of options to the form of construction of the quay whereby the piled relieving slab to the rear of the quay could be raised or omitted

entirely (subject to detailed design), and the quay wall piles could be restrained with more conventional steel anchor piles and tie bars *in lieu* of flap anchors;

- Provision of a third cross dam within the reclamation area to enable staged completion and early handover of sections of the quay;
- A change to the consented deposit location for 1.1M tonnes of clay to be dredged from the berthing pocket, to permit its disposal at HU082 if required;
- An amendment to the sequencing of the quay works to enable those works to commence at the southern end of the quay and progress northwards; and
- A change to the approved diversion of footpath FP50 in North Lincolnshire to avoid crossing over the existing rail track at the end of the Killingholme Branch Line.

- 1.5 An application for a material change to the DCO is submitted under Schedule 6 of the Planning Act 2008 and Part 2 of the Infrastructure Planning (Changes to, Revocation of, Development Consent Orders) Regulations 2011, as amended.
- 1.6 The proposed change is considered to represent EIA development as it meets the definition of Schedule 2 development set out in The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ('the EIA Regulations'); namely, that it is a change to a Schedule 2 development, where that development is already authorised (by virtue of the AMEP DCO), and the changes have the potential to give rise to significant effects of a new or different nature to those reported in the ES accompanying the original application, albeit these are limited in scope.
- 1.7 An updated ES is therefore being submitted with the application for a material change to report the significance of any new or materially different impacts.
- 1.8 This report relates to the Habitat Regulations Assessment Report (HRA) (December 2011) which was submitted in support of the original application and in particular chapters 7 (Alternative Solutions) and 8 (Imperative Reasons of

Overriding Public Interest). The purpose of this report is to clarify any changes in circumstances since these two HRA chapters were originally produced, which will then be considered in the determination of the material change application.

2.0 Alternative Solutions

2.1 This section of the report provides a review of and, where relevant, updates to Chapter 7 of the previously submitted HRA (December 2011), which demonstrates the absence of any feasible alternative solutions to meet the needs that define the project objectives. This section should therefore be read alongside the 2011 HRA report.

2.2 The following sub-sections are organised in the same way as the previously submitted HRA (December 2011) for ease of reference.

Introduction - Updates

Legislation

2.3 The Conservation of Habitats and Species Regulations 2017 now consolidate the previously referenced Conservation of Habitats and Species Regulations 2010 (S.I. 2010/490) with subsequent amending instruments, and make minor modifications reflecting changes to related legislation.

2.4 The 2017 Regulations still includes the reference to 'no alternative solutions' as referenced in the previously submitted HRA (December 2011) and the need for the 'plan or project' to be 'carried out for imperative reasons of overriding public interest'

Guidance

2.5 The previously submitted HRA (December 2011) references:

- Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats Directive 92/43/EEC, (EC, 2000); and
- EC issued guidance on Article 6(4) of the Habitats Directive: 'Clarification of the Concepts of: Alternative Solutions, Imperative Reasons of Overriding

Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission', January 2007.

- 2.6 It is important to note that as the United Kingdom (UK) left the European Union (EU), the European Commission Representation in the UK ceased all its activities as of 1 February 2020. However, in terms of updated guidance, since producing the previously submitted HRA (December 2011), the Habitats regulations assessments: protecting a European site¹ was published in February 2021.
- 2.7 Section 3 of the 'Habitats regulations assessments: protecting a European site' guidance considers 'Derogations: allow exceptions' and clarifies that *"in certain circumstances, you can allow a proposal that's failed the integrity test to go ahead. This is known as a derogation. You should tell the proposer as soon as possible if you'll consider a derogation on a proposal that's failed the integrity test. It must pass all 3 legal tests for a derogation to be granted"*.
- 2.8 The 2021 guidance clarifies that *"in certain circumstances, you can allow a proposal that's failed the integrity test to go ahead. This is known as a derogation"*. The guidance also clarifies that the proposer should be informed as soon as possible *"if you'll consider a derogation on a proposal that's failed the integrity test. It must pass all 3 legal tests for a derogation to be granted"*.
- 2.9 The 2021 guidance confirms the 3 legal tests comprise:
1. There are no feasible alternative solutions that would be less damaging or avoid damage to the site.
 2. The proposal needs to be carried out for imperative reasons of overriding public interest.
 3. The necessary compensatory measures can be secured.
- 2.10 In relation to test 1, the guidance stipulates that *"to allow a derogation you must decide that there's no alternative solution that would be less damaging to the site."*

¹ Department for Environment, Food & Rural Affairs, Natural England, Welsh Government, and Natural Resources Wales: Habitats regulations assessments: protecting a European site: February 2021

You should work with the proposer and consider whether any alternative solutions are available. This might include considering whether the proposal could:

- *happen at a different location*
- *use different routes across a site*
- *change its scale, size, design, method or timing”.*

The Objectives of the Project – Updates

2.11 The previously submitted HRA (December 2011), makes reference to the project addressing key objectives of European Energy Policy. The cornerstone of EU energy efficiency policy is Directive 2012/27/EU on energy efficiency, which establishes a set of binding measures to help the EU reach its 20% energy efficiency target by 2020, including both onshore and offshore wind.

2.12 As stated above, the UK left the EU. However, in 2019 the UK strengthened its original greenhouse gas emissions target contained in the Climate Change Act 2008 to become net zero carbon by 2050 (via the The Climate Change Act 2008 (2050 Target Amendment) Order 2019). Furthermore, since the DCO was granted in 2014, the UK has ratified the Paris Agreement with a commitment to reduce carbon output ‘as soon as possible’ and to do its best to keep global warming ‘to well below 2 degrees Celsius’. In order to help achieve net zero, the government has increased its target of 30GW of offshore wind electricity generation by 2030 to 40GW. As a result, this section of the report can confirm that the project will still meet the objectives set out in the previously submitted HRA (December 2011):

- decarbonise the means of electricity production;
- provide secure energy supplies for the UK; and
- create jobs and growth in a sector in which the UK is a global leader.

2.13 In particular the project will still:

- provide facilities for the manufacture of large scale offshore energy components;

- contribute to ‘rebalancing’ the UK economy by enabling the development of a significant manufacturing cluster - such a cluster will have a beneficial impact on the competitiveness of the European offshore wind industry; and
- regenerate the Humber Estuary sub-region, an economically deprived area of the UK.

2.14 It is considered that the points raised in paragraphs 7.2.2. to 7.2.6 of the previously submitted HRA report (December 2011) are still applicable. However, paragraph 7.2.7 of the previously submitted HRA (December 2011) requires an update. Paragraph 7.2.7 identified the Humber sub-region as an area of relative deprivation and in need of substantial investment, with both North Lincolnshire and North East Lincolnshire suffering high levels of unemployment at the time. Figure 7.1 (Index of Employment Change 1998 – 2008) in the previously submitted HRA report illustrated ‘flat’ employment growth levels in the area, compared to national and regional patterns at the time. These figures can now be updated as follows.

2.15 Upon review of the Labour Market Profile datasheets (January 2020 to December 2020) for North Lincolnshire² there were 3,900 (4.8%) unemployed people registered out of the 74,600 recorded economically active people, which is higher than both the regional (4.4%) and national (4.6%) averages (Source: ONS annual population survey).

2.16 According to the Labour Market Profile datasheets (January 2020 to December 2020) for North East Lincolnshire³ there were 3,700 (5%) unemployed people registered out of the 74,600 recorded economically active people in the area. This unemployment level is higher than both the regional (4.4%) and national (4.6%) averages (Source: ONS annual population survey). These figures mean that the findings of Figure 7.1 of the previous HRA report remain unchanged in that employment rates in North East Lincolnshire remain below the employment rates of the Yorkshire and Humber region and the UK as a whole.

² ONS (Nomis): Labour Market Profile – North Lincolnshire: June 2021

³ ONS (Nomis): Labour Market Profile – North East Lincolnshire: June 2021

- 2.17 Job density figures represent the ratio of total jobs to population in an area aged 16-64 (source: ONS jobs density). According to 2019 ONS data, the job density ratio in North Lincolnshire was 0.82 indicating that there were fewer jobs available than there are people of working age in North Lincolnshire. The job density ratio in North East Lincolnshire was 0.77, also indicating fewer jobs available than there are people of working age.
- 2.18 These figure were both below the average for Great Britain which was 0.87. This supports the emphasis of the need for future opportunities and economic strategies to continue to enable and encourage job growth and investment in the economy of North Lincolnshire/ North East Lincolnshire.
- 2.19 Paragraph 7.2.7 of the previously submitted HRA report (December 2011) also notes that site lies within the Humber Assisted Area. Upon review of the online UK Assisted Areas Map, the area still lies within an assisted area. However, as noted above, the UK has left the EU, which nullifies the previous statements regarding the area being recognised by the EU as an area that requires investment to raise employment levels and its manufacturing base.

The Need to Decarbonise Energy Production

- 2.20 Paragraph 7.2.10 of the previously submitted HRA stated that “*Current levels of greenhouse gases are higher now than at any time in at least the past 650 000 years (Stern, 2006). In 2009, the UK energy sector was responsible for 195 million tonnes of carbon dioxide equivalent emissions (DECC, 2011)*”. Upon review of the ‘2019 UK Greenhouse Gas Emissions, Final Figures’ (2nd February 2019)⁴ it recorded that in 2019, net territorial emissions in the UK of the basket of seven greenhouse gases covered by the Kyoto Protocol were estimated to be 454.8 million tonnes carbon dioxide equivalent (MtCO₂e), a decrease of 2.8% compared to the 2018 figure of 468.1 million tonnes and 43.8% lower than they were in 1990. Carbon dioxide made up around 80% of the 2019 total. The ONS report also confirmed that the decrease in greenhouse gas emissions from 2018 was mainly caused by reductions in emissions in the energy supply sector, down 8.1% (8.4 MtCO₂e). This was driven by

⁴ ONS: 2019 UK Greenhouse Gas Emissions, Final Figures: February 2021

the continued decrease in power station emissions due to the change in the fuel mix for electricity generation, in particular a reduction in the use of coal. Emissions from energy supply are now 65.5% lower than they were in 1990.

- 2.21 In seeking to reduce greenhouse gas emissions, the Prime Minister pledged at the Conservative Party Conference in October 2020 that offshore wind farms will generate enough electricity to power every home in the UK within a decade. This followed an address the Prime Minister made to a roundtable discussion at the UN in September 2020 where he outlined aspirations to turn the UK into the ‘Saudi Arabia’ of wind power. Offshore renewable energy generation, therefore, has a greater role than before in reducing greenhouse gas emissions.
- 2.22 At the same time as the address to the Conservative Party Conference, the Government announced an ‘Offshore Wind Manufacturing Investment Support Scheme for Major Portside Hubs’. The purpose of the scheme was to invite investment applications from major portside hub operators to strengthen UK offshore wind manufacturing capacity and to create employment and investment in coastal communities and the supply chain. The announcement of this Scheme clearly demonstrated that Government’s acknowledgment of the role major portside hubs can play in delivering the aspiration to reduce greenhouse gas emissions via offshore wind.
- 2.23 In November 2020 HM Government published ‘The Ten Point Plan for a Green Industrial Revolution⁵’. The ten point plan sets out the approach the UK government will take to build back better, support green jobs, and accelerate our path to net zero.
- 2.24 The document (November 2020) states that “*over the last 30 years, we have shown that economic success and environmental responsibility go hand in hand. We expanded our GDP by 75 per cent while cutting emissions by 43 per cent. Our low-carbon industries already support over 460,000 jobs, from electric vehicle manufacturing in the Midlands and the North East to our thriving offshore wind industry centred on the Humber and the Tees. In 2019, we became the first major*

⁵ HM Government: The Ten Point Plan for a Green Industrial Revolution - Building back better, supporting green jobs, and accelerating our path to net zero: November 2020

economy to adopt a legally binding obligation to reach net zero greenhouse gas emissions by 2050”.

- 2.25 Point 1 of the document is concerned with advancing offshore wind stating that *“Offshore wind is a critical source of renewable energy for our growing economy, with the UK already leading the world. By 2030 we plan to quadruple our offshore wind capacity so as to generate more power than all our homes use today, backing new innovations to make the most of this proven technology and investing to bring new jobs and growth to our ports and coastal regions”.*
- 2.26 The document further notes the importance of this technology by stating that *“with a single turn of their blades, the latest wind turbines generate enough electricity to power a house for more than 24 hours. We will put ourselves at the forefront of manufacturing as we see wind turbines grow in size. To support this enlarging industry, we will invest £160 million into modern ports and manufacturing infrastructure, providing high quality employment in coastal regions. We will also enable the delivery of 60% UK content in offshore wind projects, as set out by the industry, through more stringent requirements for supply chains in the Contract for Difference auctions. This will help attract inward investment into manufacturing in the UK and increase our global competitiveness and expertise”.*
- 2.27 The document (November 2020) states that Advancing offshore wind could deliver:
- *“Support for up to 60,000 jobs in 2030;*
 - *Around £20bn of private investment by 2030; and*
 - *Savings of 21MtCO₂e between 2023 and 2032, or 5% of 2018 UK emissions”*
- 2.28 In the March 2021 Budget, it was confirmed that *‘The government will make an offer of support, in principle, to the Able Marine Energy Park on Humberside following the conclusion of the competition to upgrade ports infrastructure for the next generation of offshore wind.’* In awarding the funding of £75m, the Prime Minister stated that *‘The Humber is already home to the largest offshore wind farm in the world, so there is no better place to build a new offshore wind port and drive forward our green industrial revolution than on the River Humber.’*

The Need for Security of the UK Energy Supply

- 2.29 In October 2019, Ofgem produced a Report titled 'State of the Energy Market 2019'. The Report includes an assessment of competition in retail and wholesale energy markets, affordability and vulnerability, the UK's progress in reducing greenhouse gases, the security of energy supplies, and how energy networks are performing. The Report finds that gas remains the main source for generating electricity in the UK, accounting for an average of 32.8% of total generation output in 2018. The Report also finds that wholesale prices are the largest single component of consumer bills. Wholesale prices are heavily influenced by external factors such as fluctuating exchange rates and weather events. Wholesale gas prices increased sharply in September and October 2018, due in part to higher commodity prices, outages in Norwegian plants and maintenance-drive supply restrictions. One of the advantages of offshore wind generation with direct cables links to the main land is the ability for the UK to secure its own energy supply without the need to rely on international markets.

The Need for Large Capacity Offshore Turbines

- 2.30 Paragraph 7.2.19 of the previously submitted HRA stated that the European Strategic Energy Technology Plan (SET-Plan) is the EU's response to the challenge of accelerating the development of low carbon technologies leading to their widespread market take-up, (EC, 2007). Although we are no longer part of the European Commission, it is important to note that the needs case still exists.
- 2.31 The Prime Minister's new vision for the UK to become the 'Saudi Arabia of wind' and a target of producing 40GW of electricity by 2030 requires significant levels of investment and development of these large capacity offshore turbines. The wind renewables sector has responded with innovation to date by building larger turbines, which equal much larger outputs to help achieve these targets. This commitment is confirmed in the in principle commitment to provide £75m of funding to the Able Marine Energy Park.

The Need to Rebalance the UK Economy

- 2.32 Paragraph 7.2.20 of the previously submitted HRA report identified that one major imbalance was considered to be the level of manufacturing in the UK compared to other industrialised countries.
- 2.33 An article in the Investment Monitor (24th November 2020 – last updated 13th May 2021) looks at the decline of British manufacturing and states that “*British manufacturing is now on the verge of huge disruption amid bleak conditions caused by the Covid-19 pandemic. A big worry hanging over the industry is what will happen to its investment. Foreign direct investment (FDI), and in particular greenfield investment into the manufacturing industry, is usually a long-term commitment and recently the UK has been riddled with uncertainty over Brexit*”.
- 2.34 As noted in paragraph 7.2.21 of the previously submitted HRA, the wind energy industry has its origins in other countries. In addition, it is worthy of note that of the 2,292 turbines installed offshore (10.4GW) there are no UK-made Nacelles or Monopiles, just a small number of transition pieces (Teesside) and a small number of towers (CS Wind – west coast of Scotland). Of course there are some notable exceptions e.g. Siemens (Hull – blades); MVOW (Isle of Wight – blades); JDR (Hartlepool – cables); OSB and Wilton (Teesside – Transition Pieces) but on the whole the UK has not reached its manufacturing potential in this sector.
- 2.35 With the levels of political support from the UK government, backed by a £160m fund to support port and manufacturing development, the beneficial socio-economic impacts which such manufacturing come yield in the UK are in sight. However, these levels of socio-economic benefit will not be realised unless the UK provides port sites suitable for manufacturing offshore wind turbines. Without such development sites, employment benefits from the offshore sector will be limited to assembly, installation and operation and maintenance.

- 2.36 The Greater Lincolnshire (GL) LEP Strategic Economic Plan (SEP) 2014 to 2030 (Refresh Spring 2016)⁶ recognises that the low carbon economy is already worth £1.2bn per annum to Greater Lincolnshire and employing over 12,000 people, and with the potential for up to £60bn of private investment over the next fifteen years, the low carbon economy offers major opportunities for growth in offshore wind (linked to manufacturing/installation of turbines and in operations and maintenance activity) as well as in biomass, biofuels, energy from waste and the development of other low carbon or environmental goods and services. The plan states that the GL LEP will collaborate with their partner LEPs (Humber and New Anglia, both Centres of Offshore Renewable Excellence) to support delivery of some of this activity.
- 2.37 The SEP (2016) also recognises that the low-carbon economy is creating new opportunities for manufacturing and engineering businesses, initially focused on the offshore wind sector. The LEP identifies the importance of the low carbon sector on the region and states that by “*working with partners across all sectors, the Humber Energy Estuary is becoming the renewable energy and offshore wind capital of Europe*”. The SEP recognises that the Able Humber Port is the UK’s fastest growing port and logistics centre and Europe’s largest new port development. The SEP confirms that the AMEP “*offers 1,389m of new heavy duty deep water quays and 366.7 hectares (906 acres) of developable land. It is designed specifically for the marine renewables sector providing a multi-user facility for the manufacture, storage, assembly and deployment of next generation offshore wind turbines (OWTs) and their associated supply chain(s). The facility will be fully fit for purpose, future proofed, and particularly suited for the deployment of new generation jack-up installation vessels*”.

The Need to Regenerate the Humber Sub-Region

- 2.38 The Greater Lincolnshire LEP Strategic Economic Plan 2014 to 2030 (Refresh Spring 2016) states that in terms of deprivation, the plan records that in the most up-to-date version of the Indices of Multiple Deprivation (IMD), released at the time of writing the plan (end of September 2015), CLG produced LEP level summaries on

⁶ Greater Lincolnshire Local Enterprise Partnership: The Greater Lincolnshire LEP Strategic Economic Plan 2014 to 2030: Refresh Spring 2016

where they rank the LEPs in terms of their average deprivation scores. Greater Lincolnshire ranked 13th of the 39 LEPs overall in terms of average deprivation levels (rank 1 being the most deprived). However, the plan reviewed the indices in more depth, and concluded that Greater Lincolnshire was the 11th most deprived in terms of education, and in the top 15 in terms of income, employment and health. This endorses the focus of our Strategic Economic Plan (SEP) and Growth Deal to date, and shows the importance of understanding and measuring how schemes supported will have a bearing upon society as a whole.

- 2.39 As expressed in paragraphs 7.2.28 to 7.2.32 of the previously submitted HRA, the development of AMEP will have a significant positive impact on these factors and will help address issues deprivation at both the local and regional levels.

Project Description – Updates

- 2.40 Paragraphs 7.3.1 to 7.3.12 of the previously submitted HRA are still considered relevant.

Stage 1: The Zero-Option – Updates

- 2.41 In relation to paragraphs 7.4.1 to 7.4.4 of the previously submitted HRA, although the UK has left the EU, the conclusion still remains that manufacturing facilities for next generation offshore wind turbines require a quayside location and the development cannot proceed without it. Due to the increasing size of offshore wind turbines, they cannot be manufactured and transported over any significant distance by road.
- 2.42 Paragraph 7.4.5 of the previously submitted HRA refers to when the EU in 2009 set out the European Wind Initiative (EU, 2009). As discussed above, the UK have left the EU, however, it is important to note that in 2020, the Crown Estate and UK government launched a new offshore wind partnership to protect and restore the country's marine environment as it seeks to chart a course towards net-zero emissions by unlocking the green energy potential of the UK seabed. The partnership, called the 'Offshore Wind Evidence and Change Programme', will gather

and harness data and evidence to drive forward the growth of the sector in the UK. Furthermore, in 2021, the Crown Estate announced six proposed new offshore wind projects in the waters around England and Wales as part of its Round 4 leasing round for offshore wind. The six projects together represent just under 8 GW of potential new offshore wind capacity, which could deliver electricity for more than seven million homes. Three of these projects are located off the east coast of England, close to the River Humber.

- 2.43 UK Energy Minister Kwasi Kwarteng said: *“The UK is already a world leader in offshore wind energy and the Government’s Ten Point Plan has laid out a bold ambition to lead the green industrial revolution by embracing innovative new technologies. “Creating jobs and increasing capacity to 40GW by the end of this decade will be key to helping us reach our commitment for net zero carbon emissions by 2050, but safeguarding our precious marine environment remains a priority, which is why this partnership is so important”.*
- 2.44 To fulfil the aims of this programme, many new offshore wind turbine manufacturing facilities are required. In summary, manufacturing facilities for next generation offshore wind turbines need to be built.

Summary

- 2.45 The development of large turbines specifically for the offshore wind sector is firmly rooted in government initiatives and regional strategic aims. Next generation offshore wind turbine manufacturing facilities must have direct access to a quay as they are too heavy to transport by road or rail. A quay is therefore an essential requirement for new offshore turbine manufacturing facilities. The zero option is therefore discounted.

Stage 2: Alternative Sites – Updates

- 2.46 This section of the previously submitted HRA report (December 2011) (paragraphs 7.5.1 to 7.5.60) considered possible alternative sites for the proposed development and it is still the conclusion that there is no alternative site to Able Marine Energy

Park that would have a less damaging effect on the Natura 2000 network. This is particularly the case when noting that the site already benefits from a Development Consent Order. It could further be reasoned that the Government considered all suitable alternatives when considering applications to their invitation for financial investment described in Paragraphs 2.21 – 2.22 of this Report. The outcome of this process was for funding to be awarded to AMEP and Teesworks Offshore Manufacturing Centre which is another consented scheme. As both schemes are progressing it is reasonable to conclude that there are no suitable alternative sites for the proposed development.

Stage 3a: Alternative Scale of Development – Updates

- 2.47 This report maintains the conclusions of the previously submitted HRA report (December 2011) that the proposed development requires the quantum of land of the application site for manufacturing of components that need direct access to a quay. It has been demonstrated in *Chapter 5* of the previously submitted ES that there is a significant need for land to be developed for this use in the UK. AMEP is not of a sufficient scale in itself to meet the overall need – other developments are required as well. Reducing the scale of the development would merely transfer the need for that quantum of development omitted to be located elsewhere. However, the number of potential alternative sites is limited; other sites are needed as well and others are also located within, or adjacent to, the Natura 2000 network themselves. Accordingly, the alternative of reducing the scale of the development is discounted as it is inconsistent with the imperative need to urgently provide significant facilities for the manufacture of offshore wind turbines.

Stage 3b: Alternative Designs – Updates

- 2.48 As discussed in paragraphs 7.7.1 to 7.7.4 of the previously submitted HRA, there is still no feasible alternative design with a lower environmental impact that will be suitable for use by the offshore energy sector. Larger turbines are required to meet the energy requirements, and these larger turbines require larger foundations and ultimately larger installation vessels. The Offshore wind generator sizes (MW) have increased 6 fold in 25 years and will continue to increase for the next decade.

Stage 4: Alternative Operation of the Facility – Updates

- 2.49 Although the UK has left the EU, it is considered that the points raised in paragraphs 7.8.1 to 7.8.3 of the previously submitted HRA in relation to key major challenges in the the assembly and installation of large-scale offshore wind farms still apply. One of these was the transfer of components from suppliers across Europe to wind farm sites. This was acknowledged to be a complex and repetitive logistical process, which required efficient transport links, large drop-off areas and suitable harbour facilities.
- 2.50 The environmental and economic impact of combined manufacturing facilities and construction ports, alongside the health and safety considerations outlined in paragraphs 7.8.4 to 7.8.8 of the previously submitted HRA are still relevant to this proposed AMEP Material Change 2 Application.
- 2.51 Although Directive 89/391/EEC referenced in paragraph 7.8.7 of the previously submitted HRA is a European Union Directive and the UK has now left the EU, it is important to note that paragraph 7.8.8 clarifies that the Directive is transposed into UK law by the Management of Health and Safety at Work Regulations 1999.
- 2.52 It is important to emphasise that logical challenges and safety issues associated with ‘alternative 1’ as discussed in paragraphs 7.8.9 to 7.8.15 of the previously submitted HRA are still applicable to this proposed AMEP material change 2 application.
- 2.53 Finally, this report echoes the conclusions reached in paragraph 7.8.16 of the previously submitted HRA which states that Alternative 2 (Maximum Pre-Assembly on Site) is the alternative proposed and provides an optimal environmental and economic solution and reduces risks to as low as reasonably practical by substantially reducing trans-shipment of goods to a construction port.

Summary and Conclusion – Updates

- 2.54 Although the project’s contributions towards the achievement of objectives of the European Energy Policy are no longer relevant (following the UK leaving the EU),

the UK is now committed to having net zero carbon emissions by 2050. The proposed development directly supports this commitment by provided appropriate land and quayside in a suitable location to facilitate the manufacture and transport of large scale offshore wind turbine components.

2.55 In addition to the support for offshore wind generation, the project will also:

- contribute to ‘rebalancing’ the UK economy by enabling the development of a significant manufacturing cluster - such a cluster will have a beneficial impact on the competitiveness of the European offshore wind industry; and
- regenerate the Humber Estuary sub-region, an economically deprived area of the UK.

3.0 Imperative Reasons of Overriding Public Interest (IROPI)

3.1 This section of the report provides a review and, where relevant, updates of Chapter 8 of the previously submitted HRA (December 2011), which summarises the imperative reasons of overriding public interest that relate to the project. This section should therefore be read alongside the 2011 HRA report.

3.2 The following sub-sections are organised in the same way as the previously submitted HRA (December 2011) for ease of reference.

Introduction – Updates

Legislation

3.3 As noted in section 2.0 of this report, the Conservation of Habitats and Species Regulations 2017 now consolidate the previously referenced Conservation of Habitats and Species Regulations 2010 (S.I. 2010/490) with subsequent amending instruments which make minor modifications reflecting changes to related legislation.

3.4 The 2017 Regulations still include the reference to ‘the need for the ‘plan or project’ to be ‘carried out for imperative reasons of overriding public interest’

Guidance

- 3.5 The previously submitted HRA (December 2011) references:
- Managing Natura 2000 Sites: The Provisions of Article 6 of the ‘Habitats Directive 92/43/EEC, (EC, 2000); and
 - EC issued guidance on Article 6(4) of the Habitats Directive: ‘Clarification of the Concepts of: Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission’, January 2007.
- 3.6 Although the UK has now left the EU, the UK Government published guidance on the HRA process in February 2021 titled ‘Habitats Regulations Assessment: Protecting a European Site’.
- 3.7 Section 3 of the ‘Habitats regulations assessments: protecting a European site’ guidance considers ‘Derogations: allow exceptions’ and clarifies that *“in certain circumstances, you can allow a proposal that’s failed the integrity test to go ahead. This is known as a derogation. You should tell the proposer as soon as possible if you’ll consider a derogation on a proposal that’s failed the integrity test. It must pass all 3 legal tests for a derogation to be granted”*.
- 3.8 The 2021 guidance confirms the 3 legal tests comprise:
- There are no feasible alternative solutions that would be less damaging or avoid damage to the site;
 - The proposal needs to be carried out for imperative reasons of overriding public interest; and
 - The necessary compensatory measures can be secured.
- 3.9 In relation to test 2 (Consider imperative reasons of overriding public interest) the guidance stipulates that *“if there are no feasible alternative solutions, you must next be able to show that there are imperative reasons of overriding public interest why the proposal must go ahead. These must justify the proposal, despite the damage it will or could cause to the European site. You must decide if the proposal is:*

- *imperative - it's essential that it proceeds for public interest reasons*
- *in the public interest - it has benefits for the public, not just benefits for private interests*
- *overriding - the public interest outweighs the harm, or risk of harm, to the integrity of the European site that's predicted by the appropriate assessment”.*

3.10 Finally, the guidance states that “*National strategic plans, policy statements and major projects are more likely to have a high level of public interest and be able to show they are imperative and overriding. Plans or projects that only provide short-term or very localised benefits are less likely to be able to show imperative reasons of overriding public interest*”.

The Basic Case

3.11 As stated in paragraph 8.1.5 of the previously submitted HRA (December 2011), fundamentally the project will deliver socio-economic benefits to the UK generally and the Humber Estuary sub-region in particular by enabling the growth of the emerging renewable energy sector. It will also have beneficial consequences of primary importance for the environment by enabling the UK's necessary transition to low carbon electricity production.

3.12 Energy is essential for society to function but current methods of electricity production in Europe are damaging to the environment and rely on nonindigenous fuel sources that are not secure in the long term. Therefore, the means of electricity production must undergo a complete transition to low carbon technologies including offshore wind and tidal energy.

3.13 The Prime Minister's new vision for the UK to become the 'Saudi Arabia of wind' and a target of producing 40GW of electricity by 2030 (PM Speech October 2020) (compared to the previous target of 30GW) requires significant levels of investment and development of these large capacity offshore turbines. The wind renewables sector has responded with innovation to date by building larger turbines, which equal much larger outputs to help achieve these targets. However, larger turbines require

larger lay down areas and heavy load quaysides to facilitate their manufacture, storage and transportation.

3.14 The government's £160m investment in upgrading the UK's ports to manage the size of a new generation of mega-turbines will also help to create supply chain hubs to help with the manufacture of these large capacity turbines.

3.15 The project will:

- Help decarbonise the means of electricity production. This is a beneficial consequence of the project that is of primary importance to the environment;
- Provide secure energy supplies for the UK; this is imperative for economic development; and
- Improve UK competitiveness by creating jobs and growth in a sector in which the UK is a global leader. Economic growth is a socio-economic imperative.

None of the above objectives '*lie entirely in the interest of companies or individuals*'.

3.16 In particular the project will:

- provide facilities for the manufacture of large scale offshore renewable energy components;
- contribute to 'rebalancing' the UK economy by enabling the development of a significant manufacturing cluster - such a cluster will have a beneficial impact on the competitiveness of the European offshore wind industry; and
- regenerate the Humber Estuary sub-region, an economically deprived area of the UK.

Description of the Imperative Public Interests – Updates

The Environmental Imperative to Decarbonise Energy Production / The Imperative Need to Secure Indigenous Energy Supplies

3.17 Please refer to Paragraphs 2.20 – 2.28 of this Report.

The Need to Develop Large Scale Wind Turbines

3.18 Please refer to Paragraphs 2.30 – 2.31 of this Report.

The Imperative Need for Economic Growth in the UK / The Need to Regenerate the Humber Sub-Region

3.19 Please refer to Paragraphs 2.32 – 2.39 of this Report.

The Certainty of the Imperative Needs – Updates

The Imperative Need to Decarbonise Energy Production / The Need to Secure Energy Supplies

3.20 Please refer to Paragraphs 2.20 – 2.29 of this Report.

The Need for Large Scale Wind Turbines

3.21 Please refer to Paragraphs 2.30 – 2.31 of this Report.

The Need for Growth in UK Manufacturing / The Need to Regenerate the Humber Sub-Region

3.22 Please refer to Paragraphs 2.32 – 2.39 of this Report.

The Immediacy of the Needs – Updates

The Imperative to Decarbonise Energy Production / The Need to Secure Energy Supplies

3.23 Please refer to Paragraphs 2.20 – 2.29 of this Report.

Need for Large Scale Offshore Wind Turbines

3.24 Please refer to 2.30 – 2.31 of this Report.

The Need for Growth in UK Manufacturing / The Need to Regenerate the Humber Sub-Region

3.25 Please refer to Paragraphs 2.32 – 2.39 of this Report.

The Duration of Public Need – Updates

The Need to Decarbonise the Means of Energy Production

3.26 The need to avoid the overriding environmental impacts of climate change is permanent. The Stern Review, Executive Summary, states that: “*The effects of our actions now on future changes in the climate have long lead times. What we do now can have only a limited effect on the climate over the next 40 or 50 years. On the other hand what we do in the next 10 or 20 years can have a profound effect on the climate in the second half of this century and in the next*”.

Security of Energy Supply

3.27 The need for secure energy supplies will always exist.

The Need for Growth in UK Manufacturing

3.28 It is imperative that the UK promotes, in the immediate term, the development of manufacturing sites that serve emerging low carbon technology sectors.

3.29 The information contained with paragraph 8.3.7 of the previously submitted HRA report is still considered applicable to this proposed AMEP material change 2 application. The need for a healthy manufacturing sector is attested to in a number of Government documents. One of the most recent publications is, ‘Growth Review Framework For Advanced Manufacturing’ (BIS, 2010).

- 3.30 Paragraph 7.2.20 of the previously submitted HRA report identified that one major imbalance was considered to be the level of manufacturing in the UK compared to other industrialised countries.
- 3.31 An article in the Investment Monitor (24th November 2020 – last updated 13th May 2021) looks at the decline of British manufacturing and states that “*British manufacturing is now on the verge of huge disruption amid bleak conditions caused by the Covid-19 pandemic. A big worry hanging over the industry is what will happen to its investment. Foreign direct investment (FDI), and in particular greenfield investment into the manufacturing industry, is usually a long-term commitment and recently the UK has been riddled with uncertainty over Brexit*”.
- 3.32 With the levels of political support from the UK government, backed by a £160m fund to support port and manufacturing development, the beneficial socio-economic impacts which such manufacturing come yield in the UK are in sight. However, these levels of socio-economic benefit will not be realised unless the UK provides port sites suitable for manufacturing offshore wind turbines. Without such development sites, employment benefits from the offshore sector will be limited to assembly, installation and operation and maintenance.
- 3.33 Economic growth is a long-term objective and is an imperative for the UK.

Manufacturing of Large Scale Wind Turbines

- 3.34 The Prime Minister’s new vision for the UK to become the ‘Saudi Arabia of wind’ and a target of producing 40GW of electricity by 2030 (PM Speech October 2020) requires significant levels of investment and development of these large capacity offshore turbines. The wind renewables sector has responded with innovation to date by building larger turbines, which equal much larger outputs to help achieve these targets.

- 3.35 The government's £160m investment in upgrading the UK's ports to manage the size of a new generation of mega-turbines will also help to create supply chain hubs to help with the manufacture of these large capacity turbines.

Regeneration of the Humber Sub-Region

- 3.36 The Greater Lincolnshire LEP Strategic Economic Plan 2014 to 2030 (Refresh Spring 2016) states that in terms of deprivation, the plan records that in the most up-to-date version of the Indices of Multiple Deprivation (IMD), released at the time of writing the plan (end of September 2015), CLG produced LEP level summaries on where they rank the LEPs in terms of their average deprivation scores. Greater Lincolnshire ranked 13th of the 39 LEPs overall in terms of average deprivation levels (rank 1 being the most deprived). However, the plan reviewed the indices in more depth, and concluded that Greater Lincolnshire was the 11th most deprived in terms of education, and in the top 15 in terms of income, employment and health. This endorses the focus of our Strategic Economic Plan (SEP) and Growth Deal to date, and shows the importance of understanding and measuring how schemes supported will have a bearing upon society as a whole.

Conclusion – Updates

The Balance of Interests

- 3.37 Where the balance of public interests weighs in favour of interests other than the strict protection of the Natura 2000 site, a decision maker may consent a project, even where the possibility of that project having an adverse effect on the integrity of a particular site cannot be excluded. This is normally only the case where the public interest is long term and where the interests are clearly in accordance with the fundamental policies of the State and for the benefit of society as a whole.

The Competing Imperative Reasons of Overriding Public Interest

- 3.38 The adverse effects on the Natura 2000 site are set out in Chapter 6 of the previously submitted ES. As noted above, since producing the previously submitted HRA report

(December 2011), the Habitats regulations assessments: protecting a European site was published in February 2021.

3.39 The guidance (2021) states that “*if your appropriate assessment has shown that the proposal has failed the integrity test on a SAC and a priority habitat or species would be affected, you can only normally consider the following reasons of public interest:*

- *human health;*
- *public safety; and*
- *important environmental benefits”.*

3.40 Fundamentally, the project will deliver socio-economic benefits to the UK generally and the Humber Estuary sub-region in particular by enabling the growth of the emerging renewable energy sector. It will also have beneficial consequences of primary importance for the environment by enabling Europe’s necessary transition to low carbon energy production.

Beneficial Consequences of Primary Importance to the Environment

3.41 There is compelling scientific evidence that rising levels of greenhouse gases in the atmosphere will have a warming effect on the earth’s climate through increasing the amount of infrared radiation (heat energy) trapped in the atmosphere, ‘the greenhouse effect’. Potential effects include: rising sea levels which threaten major cities; irreversible damage to ecosystems; major declines in crop yields and water shortages. These potential impacts are beyond any reasonable scientific doubt.

3.42 The project would enable the development of a harbour facility that is designed to support the manufacture, export and installation of renewable energy components for the marine environment.

3.43 The need for transition to a low carbon economy is certain and is necessary in the immediate term. The project will assist in enabling this transition.

The Beneficial Effect of Large Scale OWT Components

- 3.44 Energy costs need to be maintained as low as reasonably practicable. Turbine scaling increases energy capture while reducing general project infrastructure costs (as well as landscape impacts) that ultimately reduce the cost of wind energy. The need for larger turbines is recognised in Europe's Strategic Energy Technology Plan that was endorsed by the European Council in March 2008. Although the UK has left the EU, the principle of the above message is applicable to this application.
- 3.45 The scale of development in the next decade and beyond represents a step change in offshore development to date. Europe's Strategic Energy Technology Plan has recognised that doubling the output of the largest wind turbines (to >10 MW) is a key challenge for meeting the 2020 targets.
- 3.46 The project will provide facilities suitable for the manufacture and assembly of these large scale OWTs.

The Need for Security of Energy Supplies

- 3.47 The transition to low carbon means of energy production has commenced but needs to escalate rapidly. Offshore wind is now a substantially proven technology but investor confidence is imperative and the provision of sites that enable significant commercial development is an immediate and urgent need. Failure to provide such sites will constrain offshore development.
- 3.48 The UK's Low Carbon Transition Plan (DECC, 2009) records that, because of the lead times for energy infrastructure and the scale of investment required, security of energy supplies during the transition to a low carbon economy is a particular challenge. Accordingly the Plan recognises that 'a supportive climate for timely investment in a diverse mix of low carbon technologies' is required.
- 3.49 The transition to secure energy supplies cannot be delayed.

The Socio-Economic Benefit to the UK Economy

- 3.50 As noted above, The Greater Lincolnshire LEP Strategic Economic Plan (SEP) 2014 to 2030 (Refresh Spring 2016) states that in terms of deprivation, the plan records that in the most up-to-date version of the Indices of Multiple Deprivation (IMD), released at the time of writing the plan (end of September 2015), CLG produced LEP level summaries on where they rank the LEPs in terms of their average deprivation scores. Greater Lincolnshire ranked 13th of the 39 LEPs overall in terms of average deprivation levels (rank 1 being the most deprived). However, the plan reviewed the indices in more depth, and concluded that Greater Lincolnshire was the 11th most deprived in terms of education, and in the top 15 in terms of income, employment and health. Whilst the SEP Refresh in Spring 2016 remains the most up to date SEP, the Greater Lincolnshire LEP published the 'Greater Lincolnshire Plan for Growth' in March 2021 as part of a Covid Revival Plan. The immediate challenges identified in the Plan include rising unemployment which could become mass unemployment; and slow labour market recovery from the previous recession. However, under the title of 'Build Back Better' identified opportunities include competing internationally and thriving in a post-Brexit future; and joining the green industrial revolution and building a low carbon economy.
- 3.51 As detailed in paragraphs 8.6.18 to 8.6.21 of the previously submitted HRA, the development of AMEP will have a significant positive socio economic impacts and will help address issues deprivation at both the local and regional levels.
- 3.52 AMEP has the potential to encourage certain types of firms to locate in the sub-region. The presence of several major Original Equipment Manufacturers is required to enable clustering in offshore wind and AMEP would provide such opportunity.

The Significance of the Competing Interests

- 3.53 There is an imperative case that the overriding public interest outweighs the impact of the proposed development. The case of overriding public interest is in relation to:
- decarbonise the means of electricity production;
 - secure energy supplies from indigenous sources;

- manufacture large scale offshore generators;
- grow manufacturing in the UK; and
- regenerate the Humber sub-region'

3.54 The project addresses these objectives by providing a new quay with direct access to a significant land parcel that is to be developed to support the manufacture of components for the offshore renewable energy sector. This is a sector that must grow to enable the delivery of offshore wind. This aspect of the renewables sector has specific locational requirements that are realised with the least possible environmental harm.

3.55 The imperative overriding needs detailed above are both certain and immediate and the project will make a significant contribution towards them over a long period of time.

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